PROJECT REPORT ON:

E-PHARMACY

Guide: Prof. Margret Anouncia

Course: Software Engineering

Course Code: CSE325

Slot- B1+TB1

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PROJECT MANAGEMENT PLAN

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1. INTRODUCTION

This technical report outlines the contents of software development documents, and firmly based on IEEE standards. The document set is designed to support software development activities. It provides a framework for use in undergraduate software engineering projects, both individual and team-based, that helps students to learn best practice. A supplementary report describes the content of each document in more detail. This document consist of four sub documents named as Project Management Plan which gives as overview of process model used, deliverables and milestones and schedule of project; Software Requirements Specifications which gives us overview of functional and non functional requirements, scope, purpose, constraints, etc; Software Design Description (SDD) which gives us glimpses of architectural design as well as user interface designs and Software Test Documentation (STD) which is document for test cases formulated.

1.1 PROJECT OVERVIEW

Our project is on online pharmacies, Internet pharmacies, or Mail Order Pharmacies that operate over the Internet and send the orders to customers through the mail or shipping companies. We have developed a web application which can be accessed by authentic users and pharmacists. We aim to make this application as a solution to the problem of unavailability of medicines when people need it the most. Through this system, we aim to get medicines delivered to the person's house in a short time from an authentic licensed Pharmacy. Authentication of pharmacists will be done by administrator by checking the documents of them. It will also deliver medicines to chronic patients in regular intervals automatically. Bulk delivery of medicine to clinic will be done and admin will check whether clinic is authentic or not. Delivery of medicine will be done on the basis of subscription uploaded. Feedback and rating of customers will be monitored by administrator to make the system more efficient.

1.2 PROJECT DELIVERABLES

Project will consists of following deliverables:

Requirement Elicitation:	In this, we will get to know about the requirements needed by customers, functional and non functional requirements and also the time period of project.
SRS Documentation:	This document will provide us the agreed requirements after

	requirement analysis and requirement validation. It will also provide the basis for design and provide the basis for system test.
SDS Documentation:	It will provide us the document which contains design and design decisions in order to provide the basis for implementation and unit test. It will tell us the different user interaction diagrams as well as the user interface design.
Front end creation:	This will be done on basis of user requirement. It will give us the interface and web pages written in client side scripting.
Backend creation:	This will be done by creating databases as well as by implementing server side script. Integration of front end and backend will be done in this module.
Software Test Documentation (STD):	This document will provide details about how the software will be tested, and will contain its record the results.
Beta Model of product:	This version of model will be produced in real time within the customers and hence we will be able to know its performance in real time scenario.

2. PROJECT ORGANISATION

In this section we will discuss about the process model we are going to use, the roles and responsibilities carried out by each person and also the tools and techniques that we will use to implement the project.

2.1 SOFTWARE PROCESS MODEL

The process model which we are going to use is waterfall model. We have selected this model because of following reasons:

- Requirements of projects are very well known in before and are not likely to change over a period of time.
- Project can be tracked by the milestones.
- Presence of testing and verification stages.
- Good traceability and visibility of the project can be achieved by its proper documentation.
- Product definition is stable.

- Huge documentation will be helpful in long run.

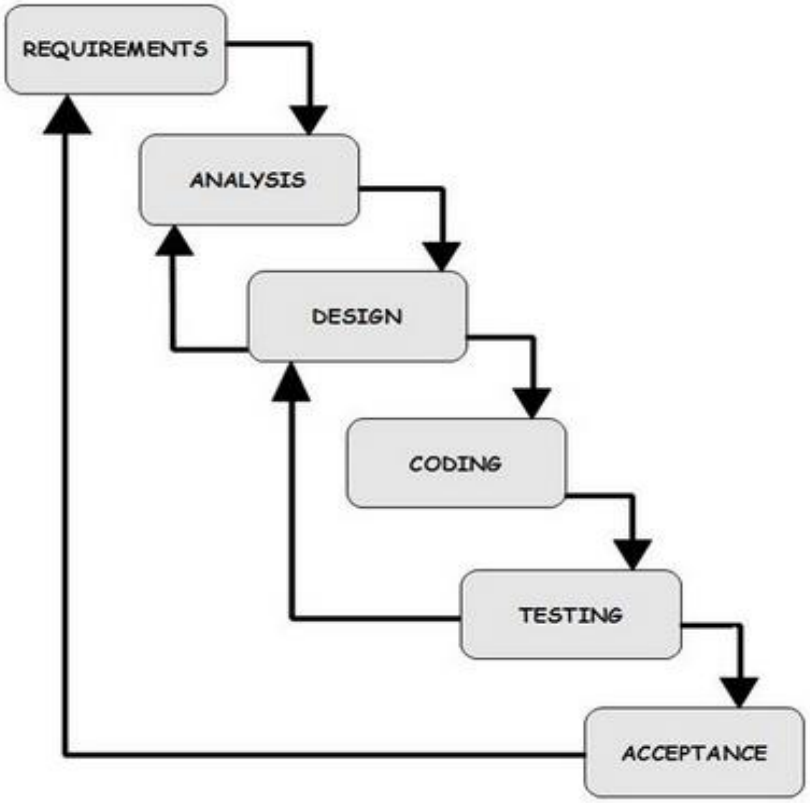


Fig.1 : Waterfall Model

Brief description of each steps:

1. System and software requirements: captured in a software requirements document
2. Analysis: resulting in models, schema, and business rules
3. Design: resulting in the software architecture
4. Coding: the development, proving, and integration of software
5. Testing: the systematic discovery and debugging of defects
6. Acceptance: the installation, migration, support, and maintenance of complete system

2.2 Roles and Responsibilities

Roles and responsibility	Done by (which team member)

Project management plan document	Kuheli Sarkar
Software Requirement Specification	Ankit Singh
Software Design Document	Kuheli Sarkar
Software Testing document	Chaitanya Dhingra
Implementation of Login and authentication module	Ankit Singh
Implementation of Add Stock Module	Chaitanya Dhingra
Implementation of View Medicine Module	Kuheli Sarkar
Implementation of Interface Design	Chaitanya Dhingra

2.3 Tools and Techniques

Approach used here is Bottom up approach i.e. first each unit is implemented. Those units are assembled to from sub system and then modules. Hence modules are implemented. Now all the modules are integrated and dependency and relationship among modules are decided which gives us a whole system.
Tools which are used are as follows:

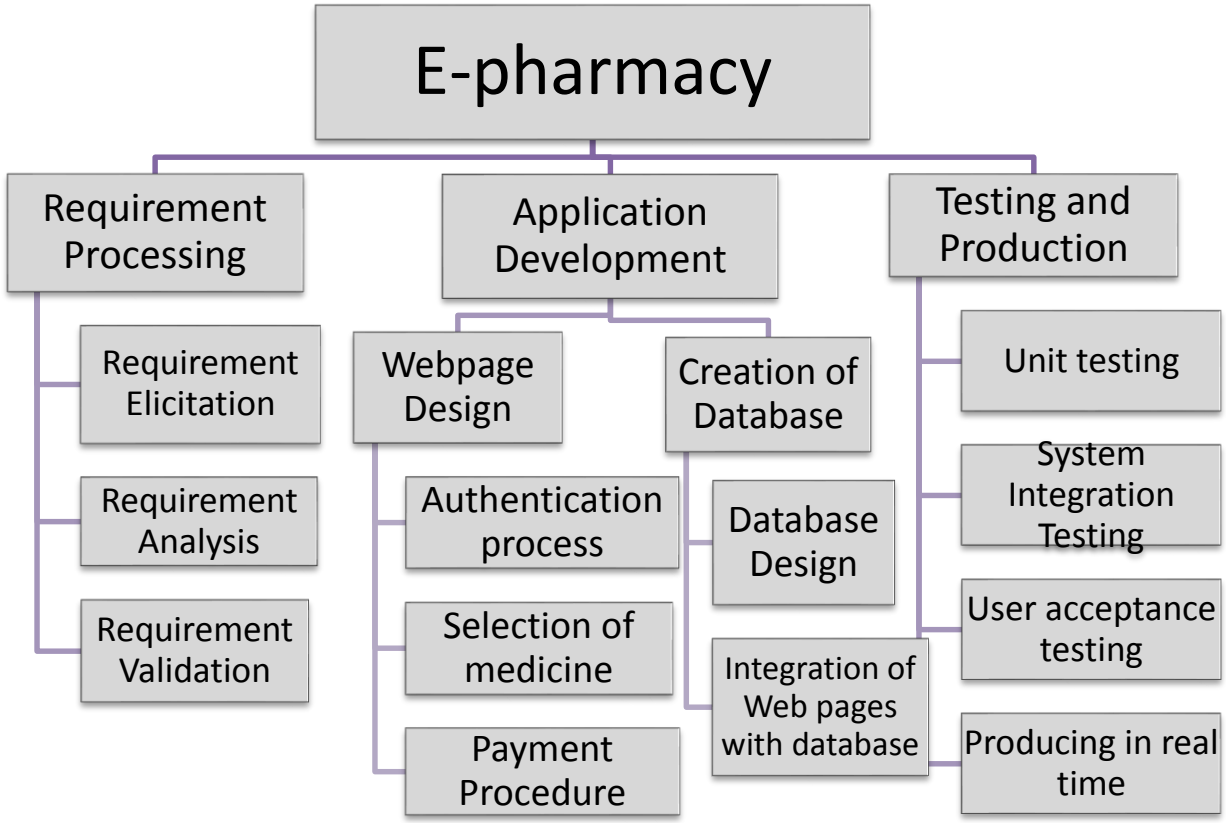
MAMP	MAMP is a solution stack composed of free and open-source and proprietary commercial software used together to run dynamic web sites on Apple Macintosh computers. MAMP is an acronym of Mac OS X, the operating system; Apache, the Web server; MySQL, the database management system; and P for PHP, Perl, or Python, all programming languages used for web development.
NetBeans	NetBeans ia s software development platform written in java. The NetBeans platform allows applications to be developed from a set of modular software components called modules. Applications based on the NetBeans Platform, including the NetBeans (IDE), can be extended by third party developers
MySql Database	MySQL is the world's second most[a] widely used relational database management system (RDBMS)[9] and most widely used open-source RDBMS. It is used for creating database.
Rational Rose	Rational Rose is tool which provides tools to expand the use of modern software engineering practices, particularly explicit modular architecture and iterative development. With help of this tools we can make interaction

	diagrams, Object oriented diagrams, UML diagrams.
Microsoft Visio	Microsoft Visio is a diagramming and vector graphics application and is part of the Microsoft Office family.

3. PROJECT MANAGEMENT PLAN

In this section we will cover scheduling with dates of modules, work break down structure consisting of both product based and process based design. In those there will be description of each deliverable and milestone and dependencies, constraints and resource needed for same.

3.1 Tasks(Process based)



Process	**Requirement Processing**
Description	In this process all the requirements will be taken from user. After that analysis of those requirement will be done to know whether requirements are feasible or not economically as well as technologically.
Deliverables	This can be checked with completion of feasibility report and Software

and Milestones	requirement specification.
Resources Needed	Input from customers about requirements, skilled software engineer who can assess the requirements.
Dependencies and Constraints	Constraint is that user should be able to tell his requirements properly and engineers should be able to understand their requirements accurately.

Process	**Web Page Design**
Description	In this we have designed the user interface for following modules such as authentication process, selection of medicine and payment procedure.
Deliverables and Milestones	Its completion can be checked by whole front end creation as deliverable.
Resources Needed	Text Editor to write codes and scripts. Browser to run the code. User interface design as specified by user.
Dependencies and Constraints	Constraints are that it should have user friendly interface. The language provided is English only.

Process	**Back End Creation**
Description	In this we have designed the backend which includes creation of database and integration of front end and back end.
Deliverables and Milestones	It can be checked by inspecting whether the integration is done properly or not.
Resources Needed	Text Editor to write codes and scripts. Browser to run the code. Server to store the database and run the server side script.
Dependencies and Constraints	Validation of input fields are done but sometimes fraud users cannot be detected. Depends fully on input field in front end side.

Process	**Testing and Production**
Description	In this process, unit testing system testing and acceptance testing will be carried out. Production of beta version will be done to know the performance of the system.
Deliverables and Milestones	System Testing document is the deliverable of this process.

Resources Needed	Testing modules will be needed in which all possible test cases should be incorporated.
Dependencies and Constraints	Constraint is that some test case may be left out so release of beta version may give birth to different test cases which are not taken in account before.

3.2 Tasks (Product Based)

1.Login Page
- 1.1 Sign In
  - 1.1.1 Authorization
  - 1.1.2 Security
- 1.2Sign Up
  - 1.2.1Validation
  - 1.2.2Add Record to Table

2. Catalogue with Search
   - 2.1 Search Module
     - 2.1.1Filter Search
       - 2.1.1 By Name
       - 2.1.2 By Vendor
   - 2.2 Updating Table
   - 2.3 Add/Delete Item
     - 2.3.1 Authorization
3. Pharmacist Profile
   - 3.1 Medicines
   - 3.2 Locality Covered
4. Orders and payment
   - 4.1 Tracking
   - 4.2 Cancellation
     - 4.2.1 Refund Status

Process	**Login page**
Description	Two login processes are sign up and sign in process are going to be implemented. For sign in there is authentication and for sign up there is

	validation and adding records to table.
Deliverables and Milestones	Login and authentication is deliverable.
Resources Needed	Text Editor to write codes and scripts. Browser to run the code. Server to store the database and run the server side script
Dependencies and Constraints	Validation of input fields are done but sometimes fraud users cannot be detected. Depends fully on input field in front end side.

Process	**Catalogue with search**
Description	In this we are having search module on basis of different parameters. View the results of the modules.
Deliverables and Milestones	By correct giving view result of specified medicine.
Resources Needed	Text Editor to write codes and scripts. Browser to run the code. Server to store the database and run the server side script
Dependencies and Constraints	Name of medicine should be known to user and also the company.

Process	**Pharmacist Profile**
Description	In this module pharmacist can add their profile and other details and also the stock in their shop.
Deliverables and Milestones	Creating database of pharmacist
Resources Needed	Text Editor to write codes and scripts. Browser to run the code. Server to store the database and run the server side script
Dependencies and Constraints	Reliability of pharmacist is not guaranteed.

Process	**Orders and payment**
Description	Orders of customers are stored and payment and are taken care of. And also tracking of products and refund modules are implemented.
Deliverables and Milestones	Payment procedure is the deliverable.
Resources Needed	Server to store the database and run the server side script Text Editor to write codes and scripts. Browser to run the code.
Dependencies and	Security of payment is on hands of bank.

Constraints

3.3 Schedules

ID	Task Name	Start	Finish	Duration
1	Requirement Eicitation	02-Feb-15	2/8/2015	7d
2	Requirement Analysis	2/9/2015	2/23/2015	15d
3	Requirement Validation	2/24/2015	3/1/2015	6d
4	System Design	3/2/2015	3/15/2015	14d
5	Database Design	3/16/2015	3/30/2015	15d
6	Webpage Design	4/1/2015	4/11/2015	11d
7	Integration of Webpage with Database	4/12/2015	4/20/2015	9d
8	Testing and Production	4/20/2015	4/30/2015	11d

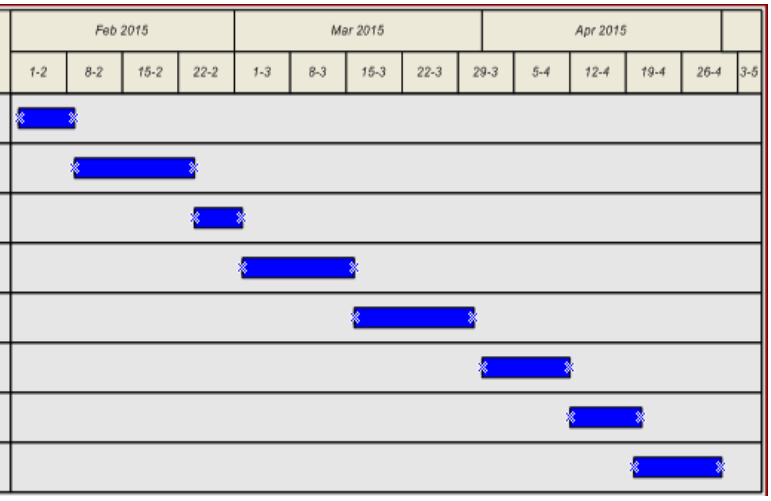


Fig 2 : Gantt Chart

Gantt chart illustrates a project schedule. Gantt chart shows the start and finish dates of the terminal elements and summary elements of a project. It shows the scheduling of different modules and the dates in which they are supposed to get complete.

Software Requirement Specification

CONTENTS

1 Introduction

1.1 Purpose

This software requirement specification (SRS) is design and its main objective is to illustrate all the requirements of the project Pharmacy Management System. This SRS documentation all the information related to the project and it will gives the detail description of each and every functional and non functional requirement that proposed by the client. And also this SRS will illustrate what are the main user interfaces that the system looks like after the implementation and how they connect each other using some sketching. Then the client can easily understand the system final system. This SRS document is design after having some consultations with the client and after getting a complete understand about the client's requirements. Therefore the final software solution of the development team will be meet all the clients requirements and all the functionalities will be function as the describe here in this SRS document.

1.2 Scope

The scope of this project is limited to the activities of a pharmaceutical store which includes will improving health outcomes reduce hospital and long term care admissions, enhance access and care in the Estate and surrounding communities and ensuring best use of resources, the use of a computer based management system for improving the efficiency of a pharmacy is needed and it is an essential part of any modern continuously evolving society.

The main objectives of system are:

- To provide delivery of medicines through online ordering
- Scheduling regular deliveries of medicines on subscription
- A person can avail the Emergency Delivery facility, where his order will be prioritized.
- Local Pharmacies can register with the website by providing proof of authentication and proper licenses
- Feedback and rating from the customers can help improve the system and make it more efficient

The limitations of systems are:

- The system will not be able to handle drug prescription, drug to drug interaction.
- The system will not be able to handle contradiction and use pharmacy in a prescription; this implies that these services will be manually completed by the pharmacist.

1.3 Definition and terms :

System :is the complete purposeful collection of interrelated components that work together to take some objectives.
Drug interaction : is a situation in which a substance (usually another drug) affects the activity of a drug when both are administered together.
Polypharmacy : is the use of multiple medications by a patient, especially when too many forms of mediation are used by a patient ,i.e. when more drugs are prescribed than is clinicly warranted.
Contradiction : is the condition or factor that serves as a reason to withhold acertain medical treatment.

1.4 References :

List of project-related references or applicable documents that bear on this project:

- Leffingwell, Dean and Widrig, Don (2003) Managing Software Requirements: A UseCase◊ Approach, 2nd. Edition, Addison Wesley Longman.
- Team #5's Project Proposal document: Info627_assignment0_Team5.doc
- Info627_Assignment-1_Team5.v2.doc
- AllScripts healthcare software website, http://www.allscripts.com/
- Monk, A., Howard, S. The rich picture: a tool for reasoning about work context
- Notes from Interview with Dr.Chou (Chief Medical Informatics Officer of DUCOM)
- Notes from Interview with Kelly (Lead Staff at DCCC)
- Notes from Interview with Nancy (Systems Analyst at DUCOM)
- Notes from Interview with Debra (Medical Director of DCCC)

1.5 Overview:

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

2. Overall Description

This section will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. It will also describe what type of stakeholders that will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.

2.1 Product Perspective :

- Cross platform support : Offers operating support for most of the know and commercial operating system .
- User account : The system allows the user to create their accounts in the system and provide features of updating and viewing profile.
- Search : search is basically local search engine based on keyword.
- Feedback : provides user to provide feedback for pharmacists and web portal.
- Availablity : Make possible for users to buy medicine anywhere any time.
- Easy order tracking and canceling: user can track their orders and also cancel them.
- The user needs to login before using the sevice.
- The user needs internet connection in order to user the service.
- The information is stored in database so there is a memory constraint.

2.2 Product Functions :

With the user inputs the web portal will be able to search medicines and display it to user as a list on selecting which redirects to the deatial of that medicine and its availablity in stock.The user can order the medicne and track or cancel it anytime.after the oder is placed by user this information is sent to pharmacists who sents the products to user.

the user can also provide hiss feedback to pharmacist or web portal.The web portal also maintain a profile for each user with their previous pharchases.The pharmacists can update the medicine stock details with the web portal .

2.3 User Characteristics:

There are three types of users that interact with the system: users of the web portal, pharmacists and administrators. Each of these three types of users has different use of the system so each of them has their own requirements.

The customer is expected to be Internet literate and be able to use a search engine. The main screen of the web portal will have the search function where he can search the medicine by name or keywords.

The Administrator are expected to be Internet literate and to be able to use email with attachments .He will respond to user feedback and add or remove certified pharmacists.

The pharmacists are expected to be Internet literate .The pharmacits will update medicine availablity in database and respond to the user orders with email.

2.4 *Constraints*

Hardware Constraints:

The system requires a database in order to store persistent data. The database should have backup capabilities.

Software Constraints:

The development of the system will be constrained by the availability of required software such as web servers, database and development tools.

The Internet connection is also a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function

2.5 Assumptions and dependencies :

- It is assumed that the system will be developed using the PHP technology.
- It is assumed that the system will be able to interface with an email server in order to send an update email to customers.
- It is assumed that the system will interface with a SQL Server 2000 database.
- It is assumed that the basic pasword protaction and role based mechenism is enough for security of system.

2.6 Requirements from stakeholder's view point:

- **Cutomers** :

    - The following developing system should Authenticate the customers
    - The customer should be able to check medicine availability
    - The customer should be able to order medicines as per their requirement
    - The customer should be able to View/Update profile
    - The customer should be able to provide feedback
    - The customer should be able to search medicine
    - The following developing system should allow customer for subscription for delivery at regular interval

- The customer should be able to track and cancel order
- The customer should be able to Communicate with the venders and pharmacists

Pharmacists :

- The developing system should facilitate pharmacists to update medicines availablity in stock.
- The following developing system should Authenticate the pharmacists.
- The developing system should facilitate pharmacists to view/update profile.
- The developing system should facilitate pharmacists to Add and delete medicines.
- The developing system should facilitate pharmacists to communicate with customers.

Administrator :

- The following system should Authenticate the administrator.
- The developing system should facilitate administrator to approve certified pharmacists
- The developing system should facilitate administrator to Manage Customers
- The developing system should facilitate administrator to Communicate with customer and vender.
- The developing system should facilitate administrator to generate online bill for Customer's order.

3. Specific requirements

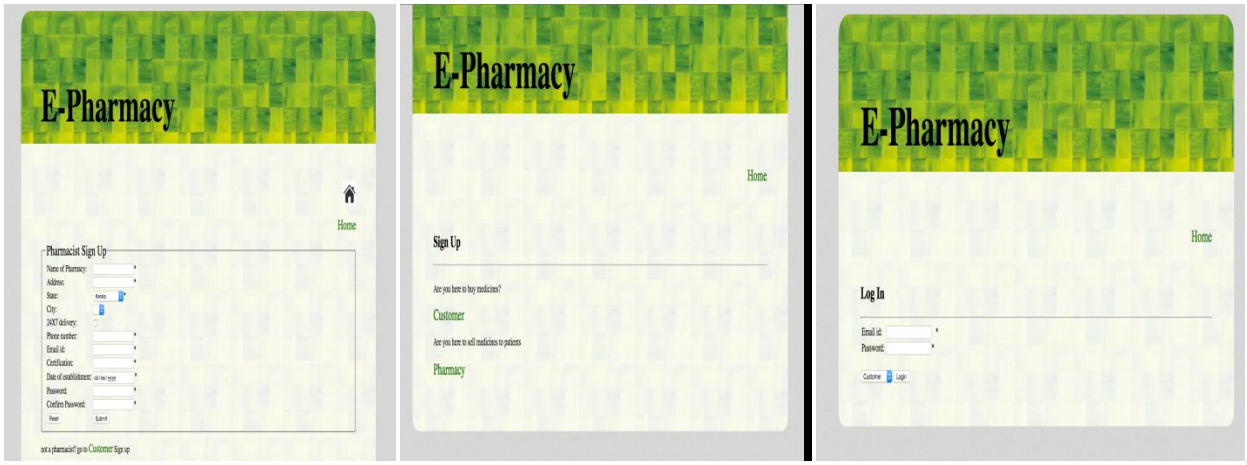
This section contains all of the functional and quality requirements of the system. It gives a detailed description of the system and all its features.

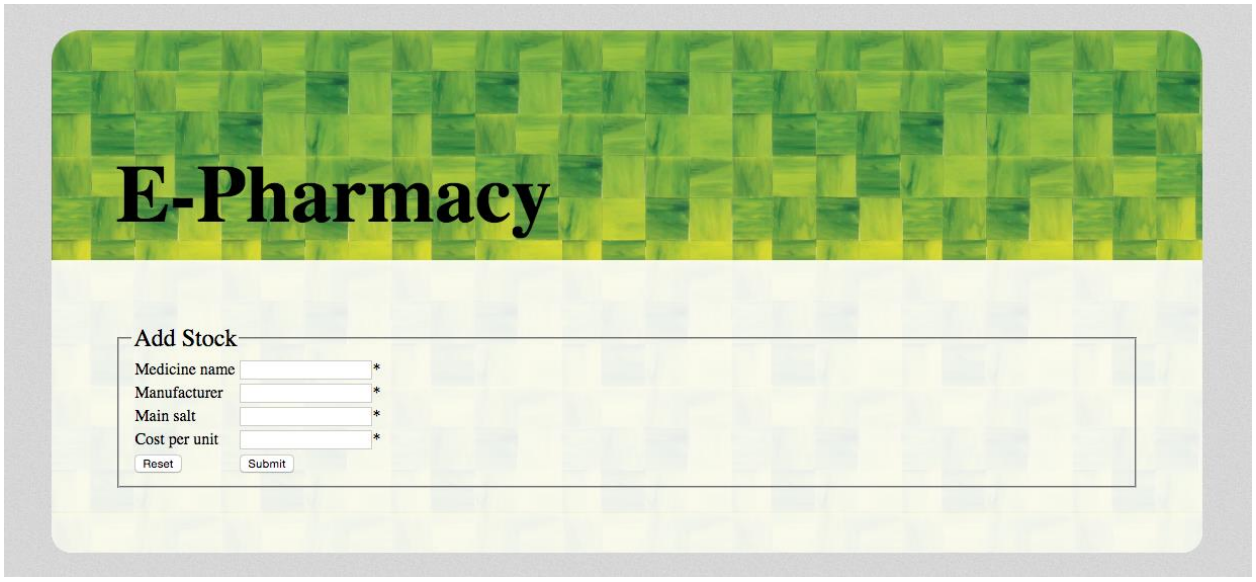
3.1 External interface Requirements :

This section provides a detailed description of all inputs into and outputs from the system. It also gives a description of the hardware, software and communication interfaces and provides basic prototypes of the user interface

3.1.1 User interfaces:

A first-time user of the mobile application should see the log-in page when he/she opens the web portal, see Figure 2. If the user has not registered, he/she should be able to do that on the log-in page. If the user is not a first-time user, he/she should be able to see the search option and list of medicines directly when the portal is opened, see Figure 3. Here the user chooses the select medicine ,full deatil of that medicine is shown .





3.1.2 Hardware interfaces

Since the web portal does not have any designated hardware, it does not have any direct hardware interfaces. The hardware connection to the database server is managed by the underlying operating system on the mobile phone and the web server.

3.1.3 Software interfaces

The web portal communicates with the database in order to get medicine information The communication between the database and the web portal consists of operation concerning both reading.

3.1.4 Communications interfaces :

The communication between the different parts of the system is important since they depend on each other. However, in what way the communication is achieved is not important for the system and is therefore handled by the underlying operating systems for the web portal.

3.2 Functional requirements

This section includes the requirements that specify all the fundamental actions of the software system.

3.2.1 User Class 1 - The User

3.2.1.1 Functional requirement 1.1

Feature: Customer log-in
In order to use the system A customer should be logged in to the web-portal

Scenario: Successful log-in
Given the customer wants to log in When the customer logs in with his/her account Then the customer should be logged in as a customer.

Scenario: Retrieve password
Given the customer wants to log in And has lost the password When the customer enters his/her email address in the “Retrieve password” form And submits the form Then the customer should receive an email containing the password

Feature: Create an account
In order to create an account A restaurant owner Should register on the web-portal

Scenario: Required information
For registration given the restaurant owner wants to create an account And the restaurant owner does not have an account 15 When the restaurant owner registers on the web-portal by providing user-name And password And address And e-mail address And phone number Then the restaurant owner should be able to apply for verification

Scenario: Full information
For registration Given the restaurant owner wants to create an account And the restaurant owner does not have an account When the restaurant owner registers on the web-portal by providing

user name And password And address And e-mail address And phone number And mobile number Then the restaurant owner should be able to apply for verification

Scenario: Confirmed registration
Given the restaurant owner has applied for verification And has not received a confirmation e-mail after registration When the restaurant owner receives a confirmation e-mail Then the restaurant owner should be able to log in

3.2.2 User Class 2 – Pharmacists

Feature: Customer log-in
In order to use the system pharmacists should be logged in to the web-portal

Scenario: Successful log-in
Given the pharmacists wants to log in When the pharmacists logs in with his/her account Then the pharmacists should be logged in as a customer.

Scenario: Retrieve password
Given the pharmacists wants to log in And has lost the password When the pharmacists enters his/her email address in the "Retrieve password" form And submits the form Then the pharmacists should receive an email containing the password

Feature: Manage medicine:
In order to keep track of the users An administrator Should be able to manage the users

Scenario: Edit a medicine availability Given the pharmacist is logged in When the pharmacist edits an existing user Then the user information should be updated

Scenario: Delete an existing medicine given the pharmacist is logged in when the pharmacist deletes an existing medicine then the medicine should be deleted

3.2.3 User Class 3 – Administrator

Feature: Customer log-in
In order to use the system A Administrator should be logged in to the web-portal

Scenario: Successful log-in
Given the Administrator wants to log in When the customer logs in with his/her account Then the Administrator should be logged in as a customer.

Scenario: Retrieve password
Given the Administrator wants to log in And has lost the password When the Administrator enters his/her email address in the "Retrieve password" form And submits the form Then the Administrator should receive an email containing the password

Feature: Manage users:
In order to keep track of the users An administrator Should be able to manage the users

Scenario:
Edit an existing user given the administrator is logged in when the administrator edits an existing user Then the user information should be updated

Scenario:
Delete/Inactivate an existing user given the administrator is logged in when the administrator deletes an existing user Then the user should be deleted

Feature: Verify pharmacist owner
In order to allow a pharmacist to use the system an administrator should be able to verify the certificates of pharmacists

Scenario: Verify a pharmacists
Given the administrator is logged in When the administrator verifies a pharmacists Then the pharmacists should be able to log in And the restaurant owner should be notified by a confirmation email

Scenario: Reject a pharmacists

Given the administrator is logged in when the administrator rejects a pharmacists Then the pharmacists should not be able to log in And the pharmacists should be notified by a rejection email

Feature: Manage pharmacist information
In order to manage pharmacist information An administrator Should be logged in to the web-portal

Scenario: Add pharmacist information
Given the administrator is logged in When the administrator adds pharmacist information Then the information should be added to the restaurant

Scenario: Delete pharmacist information
Given the administrator is logged in and information about a pharmacist exists When the administrator deletes the information Then the information about the pharmacist should be deleted

Scenario: Edit pharmacist information
Given the administrator is logged in And information about a pharmacist exists When the administrator edits the information Then the information about the pharmacist should be edited

3.3 Performance requirements

The requirements in this section provide a detailed specification of the user interaction with the software and measurements placed on the system performance.

3.3.1 Prominent search feature

ID: QR1
TITLE: Prominent search feature
DESC: The search feature should be prominent and easy to find for the user.
RAT: In order to for a user to find the search feature easily.
DEP: none

3.3.2 System Security

ID: QR2
TITLE: System should be secured
DESC: Apart from authenticated user no one should be able to access it
RAT: In order to secure the usage of medicine.
DEP: none

3.3.3 System Reliability

ID: QR3
TITLE: System should be reliable.
DESC: The system should be reliable so that authentic medicines get delivered.
RAT: In order to deliver authentic medicines
DEP: none

3.3.4 Compatible in all Operating System

ID: QR4
TITLE: Compatibility
DESC: System should be compatible in all operating system such as windows, Linux, Mac OS
RAT: System should be compatible in all operating system so that wide range of users can use it.
DEP: none

3.3.6 Response time

ID: QR5
TAG: Response Time
GIST: The fastness of the search
SCALE: The response time of a search
METER: Measurements obtained from 1000 searches during testing.
MUST: No more than 2 seconds 100% of the time.

WISH: No more than 1 second 100% of the time.

3.3.7 System dependability

ID: QR8
TAG: System Dependability
GIST: The fault tolerance of the system.
SCALE: If the system loses the connection to the Internet or to the GPS device or the system gets some strange input, the user should be informed.
METER: Measurements obtained from 1000 hours of usage during testing.
MUST: 100% of the time.

3.4 Design constraints

This section includes the design constraints on the software caused by the hardware.

3.4.1 Hard drive space

ID: QR10
TAG: Hard Drive Space
GIST: Hard drive space.
SCALE: The application's need of hard drive space.
METER: MB.
MUST: No more than 20 MB.
PLAN: No more than 15 MB.
WISH: No more than 10 MB.
MB: DEFINED: Megabyte

3.4.2 Application memory usage

ID: QR11
TAG: Application Memory Usage
GIST: The amount of Operate System memory occupied by the application.
SCALE: MB.
METER: Observations done from the performance log during testing
MUST: No more than 20 MB.
PLAN: No more than 16 MB WISH: No more than 10 MB
Operate System: DEFINED: The mobile Operate System which the application is running on.
MB: DEFINED: Megabyte.

Software Design Description

Contents

1. Introduction

1.1 Design Overview

(Client Side)

There are 3 types of users-

1. Admin: The admin has his own login credentials with which he can login and log-out. He can update the details of all the pharmacists. He can approve requests of the pharmacist and has an authority over the entire system.
2. Registered user: Customers who are registered can view the medicines and order the medicines by submitting the subscription.
3. Pharmacists: Registered pharmacist can add stock, update stock and delete stock. Pharmacist request are approved only by admin.

(Server Side)

SERVER-

It plays a role in validation of the login credentials of a user when a user will login. It is connected to the database and all the data is stored through the server. It is responsible for captcha generation every time a user will login. It will redirect to the customized page when a medicine is ordered. It is responsible for generating errors and updating details.

(Data Tier)

DATABASE:

The database will be used to store the details of all the users in a user table. Table for customer and pharmacist login are different. In that there is table in which pharmacist add, update and delete stock. Admin has different table and has access to all other tables. When a user orders medicine it is updated in his account and order is redirected to nearest available pharmacist.

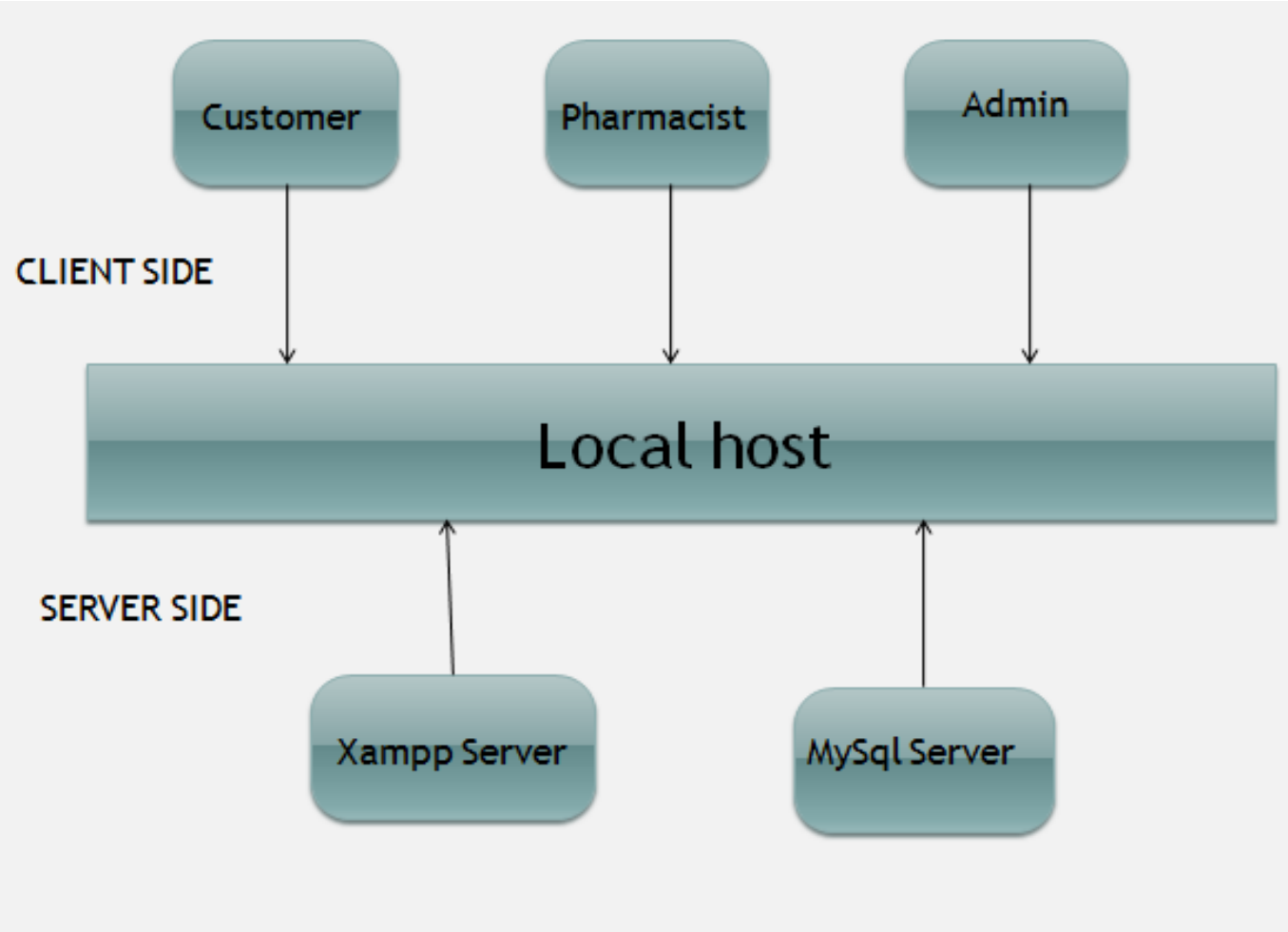
1.2 Requirement traceability Matrix

Requirements/ Test Case	Authentication	Add Stock	Update Stock	View Stock
User Wants To View all the Medicines	X			
Pharmacist Tries to sign up without all details	X			
Pharmacist Tries to sign up with wrong details	X			
Customer Tries to sign up without all details	X			
Pharmacist Tries to sign up with wrong details	X			
Customer wants to view the stock				X
Pharmacist enter the stock		X	X	
Pharmacist updates with false stock		X	X	

2. System Architecture

2.1 Chosen System architecture:

Our project has been designed using Client-Server architecture. The client–server model of computing is a distributed computing structure that partitions tasks or workloads between the providers of a resource or service, called servers, and service requesters, called clients. Often clients and servers communicate over a computer network on separate hardware, but both client and server may reside in the same system. A server host runs one or more server programs which share their resources with clients. A client does not share any of its resources, but requests a server's content or service function. Clients therefore initiate communication sessions with servers which await incoming requests. In our model, Clients are customers and servers can be distributed according to the services and location of customer. Server can fetch input of customer from database. The client server model is the most apt architectural model because our processes and modules are well defined and have least chances of being subjected to a major change, and as it uses web technologies it perfectly matches our needs.



2.2Discussion of alternative design:

The pump or producer is the data source. The filter filters the data it receives via the pipes with which it is connected. The pipe is the connector that passes data from one filter to the next. The sink or consumer is the data target. In this scenario, medicines selected by customer will be the input. It goes through many processes such as payment, subscription verification, etc which acts as filter. Advantages of this system are that it is easy to understand and supports transformation reuse, Workflow style matches the structure of many business processes. Evolution by adding transformations is straightforward and can be implemented as either a sequential or concurrent system.

2. Detailed Description of Components

Component	Description
Administrator	Monitor all the functions activities of customer as well as pharmacists
Customer	One who wants to buy the medicine
pharmacist	One who sells the medicine
Purchase	Here, customer will select the medicine and purchase it.
Find medicine	To find the medicines are available or not
order	To order the medicine i.e. payment procedure
Cancel	To cancel the order.
Track	Here tracking of order is done by customer by order number generated.
Update stock	Updation of stock by the pharmacist and approved by admin
Add stock	Addition of order by pharmacist and approved by admin
Delete stock	Deletion of stock by pharmacist or admin
Add Pharmacist	Addition of pharmacist by administrator
Feedback	Evaluation of pharmacist by administrator according to the feedback given by customer.

3 User Interface Design

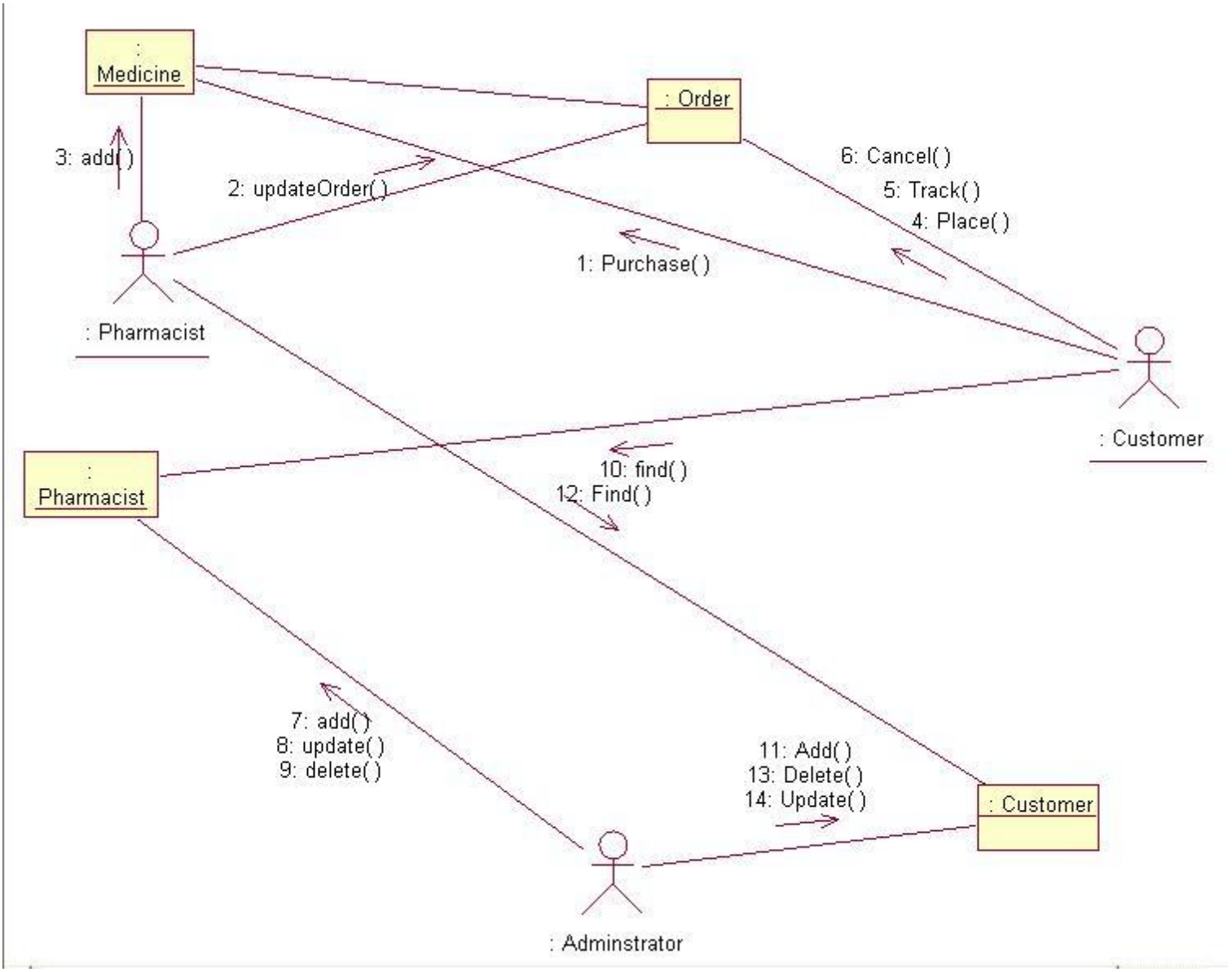


Fig 3 :Collaboration Diagram

The second interaction diagram is collaboration diagram. It shows the object organization as shown below. Here in collaboration diagram the method call sequence is indicated by some numbering technique as shown below. The number indicates how the methods are called one after another. We have taken the same order management system to describe the collaboration diagram.

The method calls are similar to that of a sequence diagram. But the difference is that the sequence diagram does not describe the object organization where as the collaboration diagram shows the object organization.

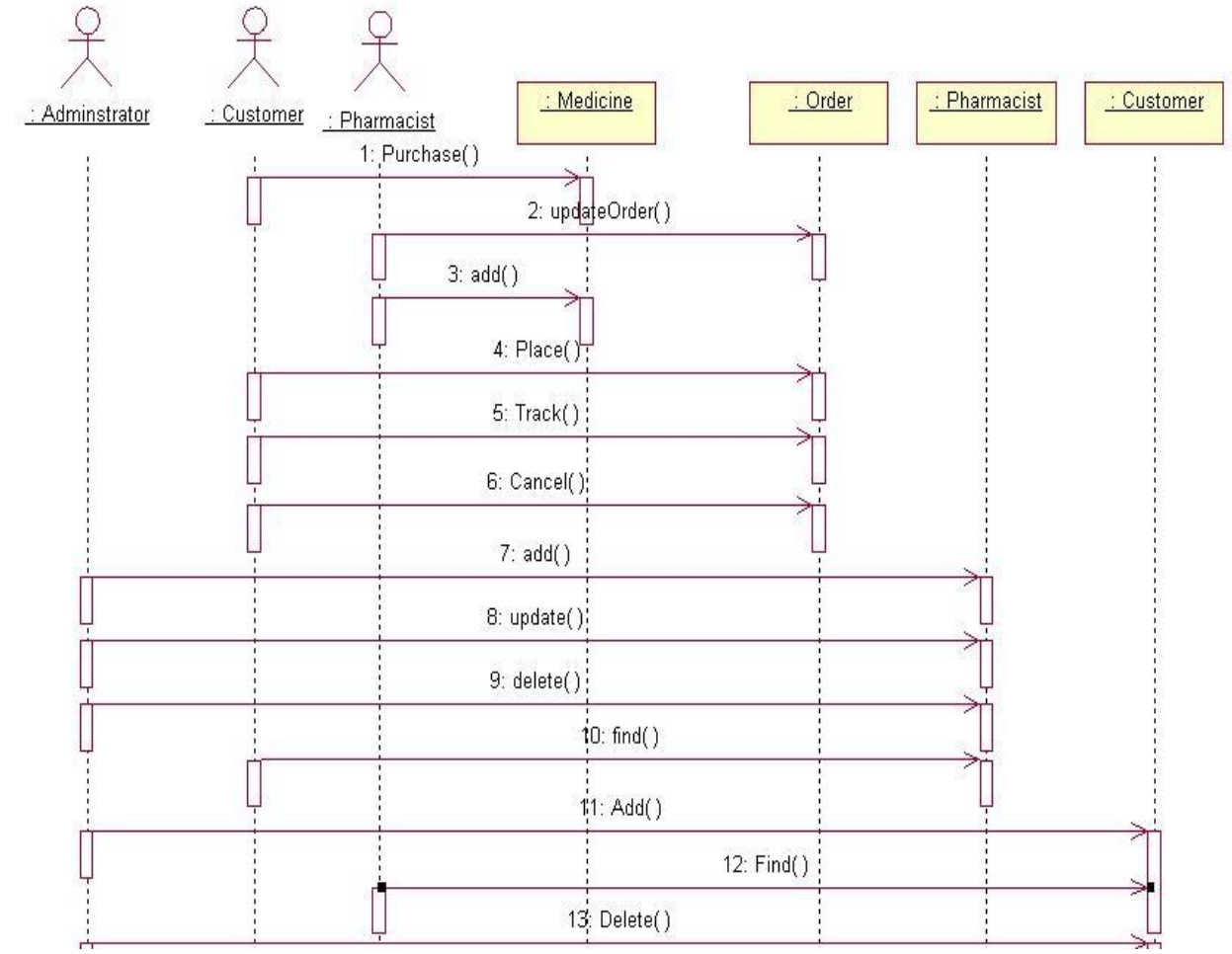


Fig 4: Sequence Diagram

A Sequence diagram is an interaction diagram that shows how processes operate with one another and what is their order. It is a construct of a Message Sequence Chart. A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called event diagrams or event scenarios.

Software Test Documentation

CONTENTS

1. Testing Introduction

The software has gone under vigorous testing to find the maximum number of loops and bugs to make the software fault free. The E-Pharmacy is a web application with clearly defined functional and non- functional requirements. The test approach was a bottom-up approach as individual modules were tested separately and then the entire system as a whole. This allowed for easier creation of test conditions also allowing observations of test results to be easier. The only disadvantage of this approach was that the program as an entity didn't exist until the last module was added.

1.1 Testing Approach

The testing approach being used is the bottom-up and Reactive approach. All modules have been tested individually at the modular level followed by integration testing to test the overall system.

3 TEST PLAN

3.2Features to be tested

3.2.1 Registration and Validation
3.2.2 Addition of Stock
3.2.3 Viewing of Stock
3.2.4 Proper page redirection
3.2.5 Database Connectivity and Transactions

3.3Features not to be tested

3.3.1 Performance Testing
3.3.1.1 Load Testing
3.3.1.2 Stress Testing
3.3.1.3 Soak Testing
3.3.1.4 Spike Testing
3.3.2 Security Testing
3.3.2.1 Injections
3.3.2.2 Cross-Site scripts
3.3.2.3 Invalidated Redirects and Forwards
3.3.3 Compatibility Testing

3.3.3.1 Browser Compatibility

3.3.3.2 OS compatibility

3.3.3.3 Platform Compatibility (Notebook, Mobile, etc)

3. TEST CASES

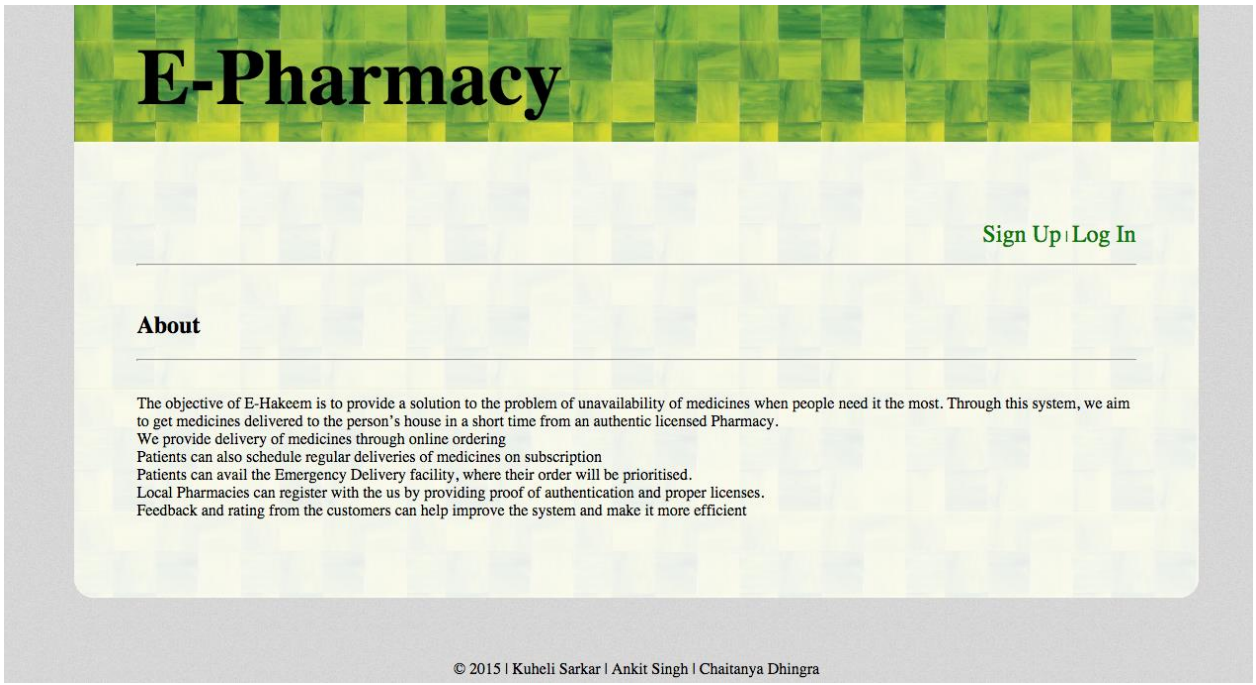
Test Case ID	Test Case	Expected Result	Actual Result	Test Outcome
1	User Wants To View all the Medicines	The whole medicine stock is shown to the user	The whole medicine stock was shown to the user	PASSED
2	Pharmacist Tries to sign up without all details	The form is not processed and required fields are prompted	The form is not processed and required fields are prompted	PASSED
3	Pharmacist Tries to sign up with wrong details	The Form is validated and rejected	The form is processed successfully	FAILED
4	Customer Tries to sign up without all details	The form is not processed and required fields are prompted	The form is not processed and required fields are prompted	PASSED
5	Pharmacist Tries to sign up with wrong details	The Form is validated and rejected	The form is processed successfully	FAILED
6	Customer wants to view the stock	It should give the stock updated in table	It gives the same result	PASSED
7	Pharmacist enter the stock	It should get stored in database	It gets store in database	PASSED
8	Pharmacist updates with false stock	It should not get updated in database	It gets store in database.	FAILED

Additional Information

Screen Shots:

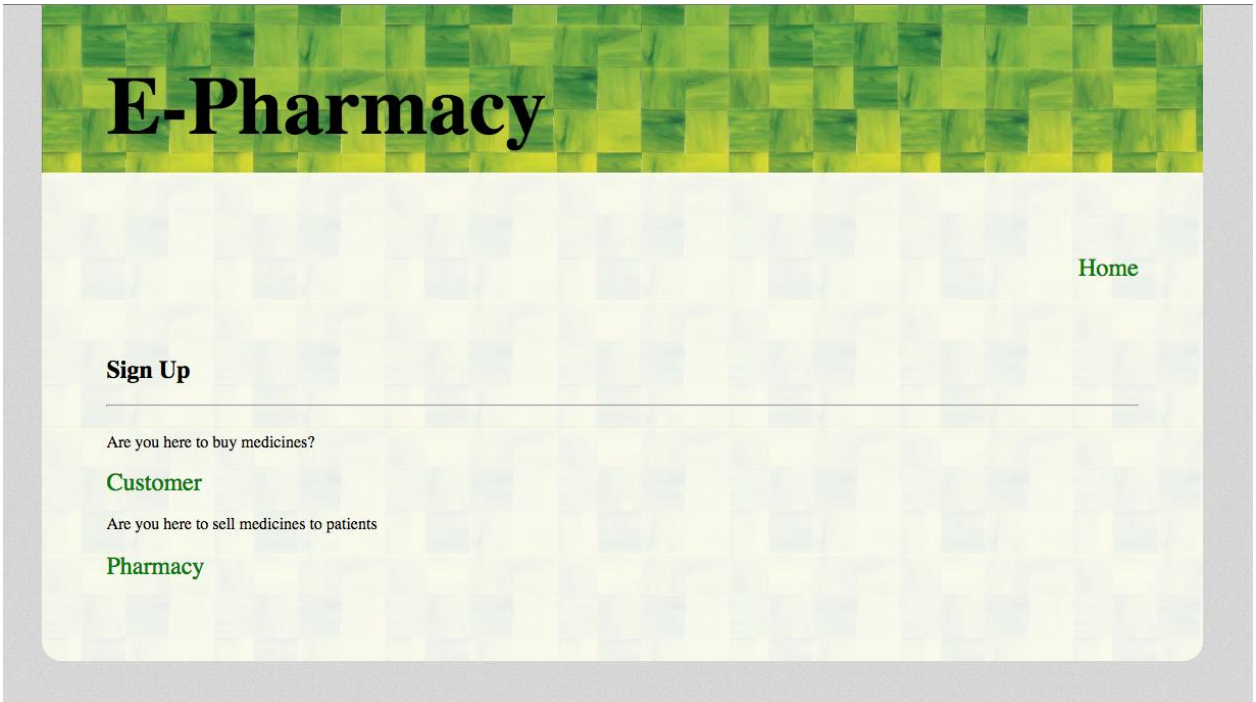
1. Add Stock: Pharmacist adds stock to database.

2. Home page having sign up and sign in option

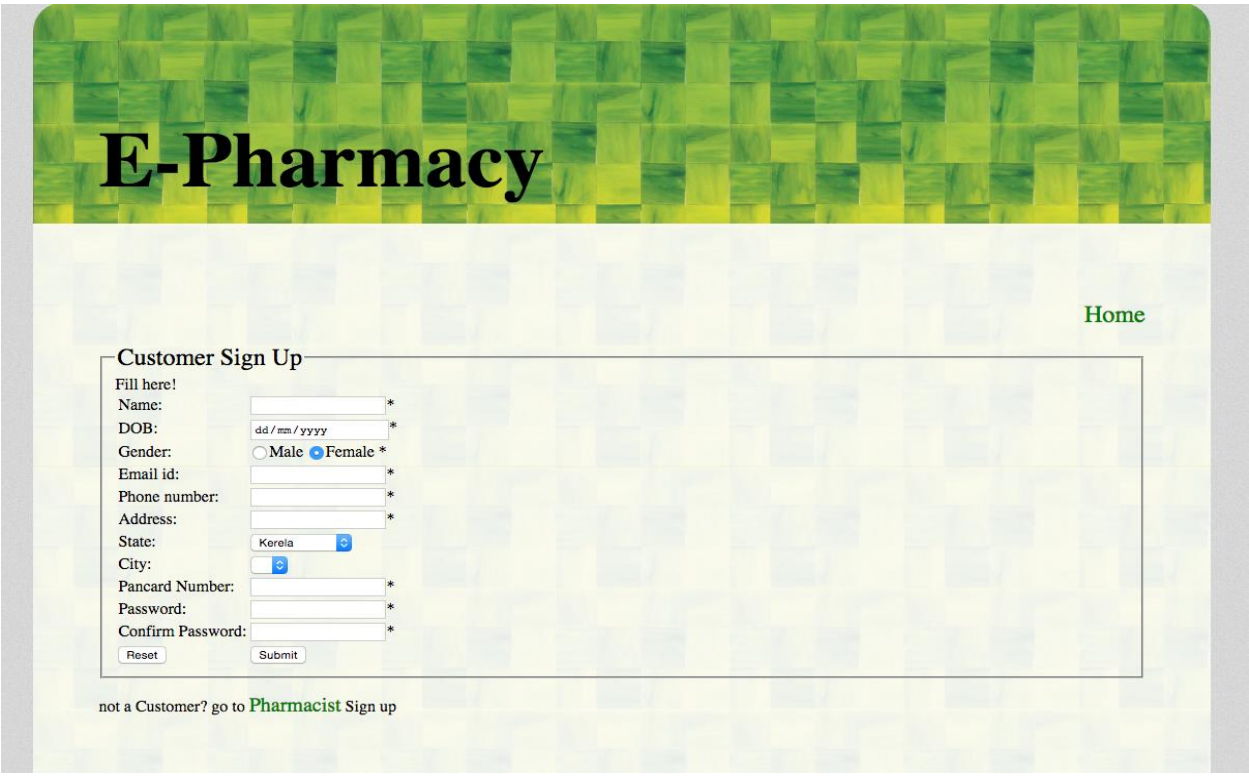


3. Log-in of Customer and Pharmacist.

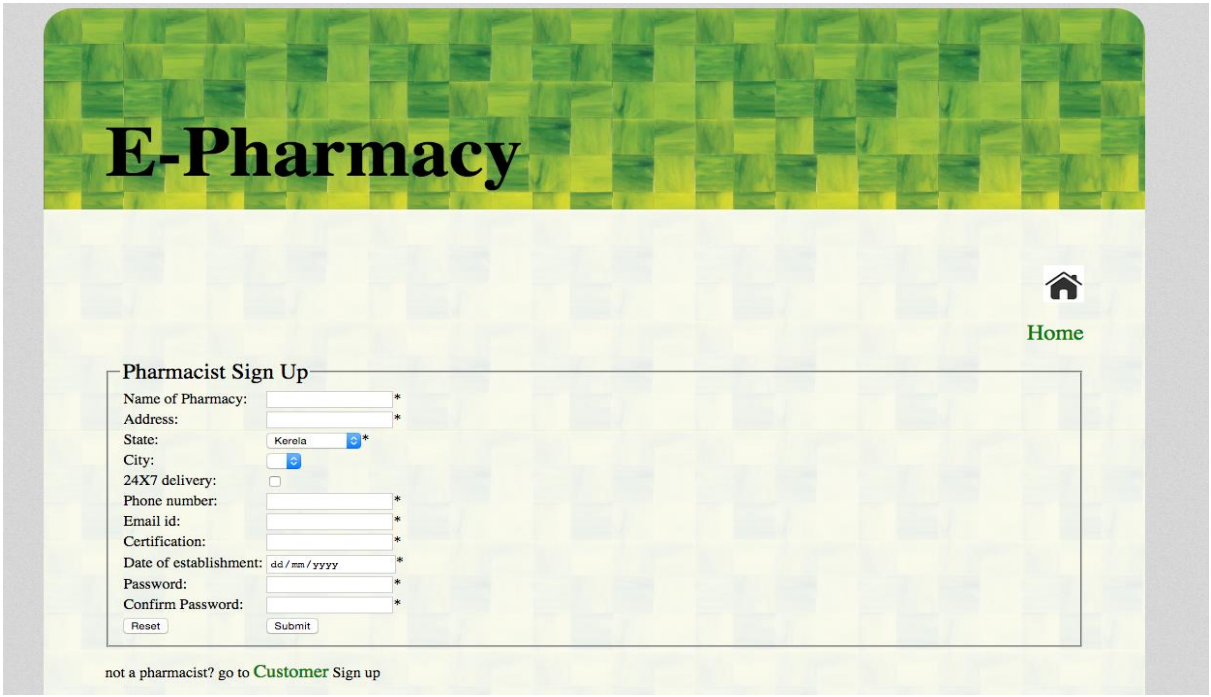
4. Sign up: As customer or pharmacist.



5. Customer Sign up Module.



6. Pharmacist Sign Up Module



CONCLUDING REMARKS:

Team contribution:

KUHELI SARKAR: Project Management Plan. Software Design Specification. Add Stock.

ANKIT SINGH- Software Requirement Specification, Login and Authentication.

CHAITANYA DHINGRA – Software Testing Document, Sign up module,View Stock, User Design Interface.

Innovative idea of the project:

It is very important for chronic patients. Purchasing Medicines from reliable source is a major concern. It also gives profit to pharmacist.

Project Experience:

This project helped us to learn the concepts of software engineering and how proper requirement analysis can help to design a system. We got to know about how practically the design the components of software engineering actually plays an important role in gathering requirements, analyzing them and how we can design the requirement and how requirement are converted in real application. Also how test cases are important in designing the architecture. Systematic approach is really helpful for doing any project. It also gave us exposure to new web technologies and how that can be implemented in a website.

Overall Outcome learned:

The project taught us how work can be divided in a team and how we can actually implement software engineering concepts in our work. We as a team got to learn the importance of team work. The project gave us insight of real time scenario. It will really help us in future. It also gave exposure to different kinds of applications and thus increasing our experience in this area.